BEFORE THE

STATE CORPORATION COMMISSION

OF VIRGINIA

Application of	)	
	)	
Verizon Virginia Inc.	)	**Case No. PUC-2007-_____**
and	)	
Verizon South Inc.	)	
	)	
For a Determination that Retail Services Are	)	
Competitive and Deregulating and Detariffing	)	
of the Same	)	

HARRISONBURG (HAR)

EXHIBITS

PUBLIC VERSION

Harrisonburg (HAR) Exhibits

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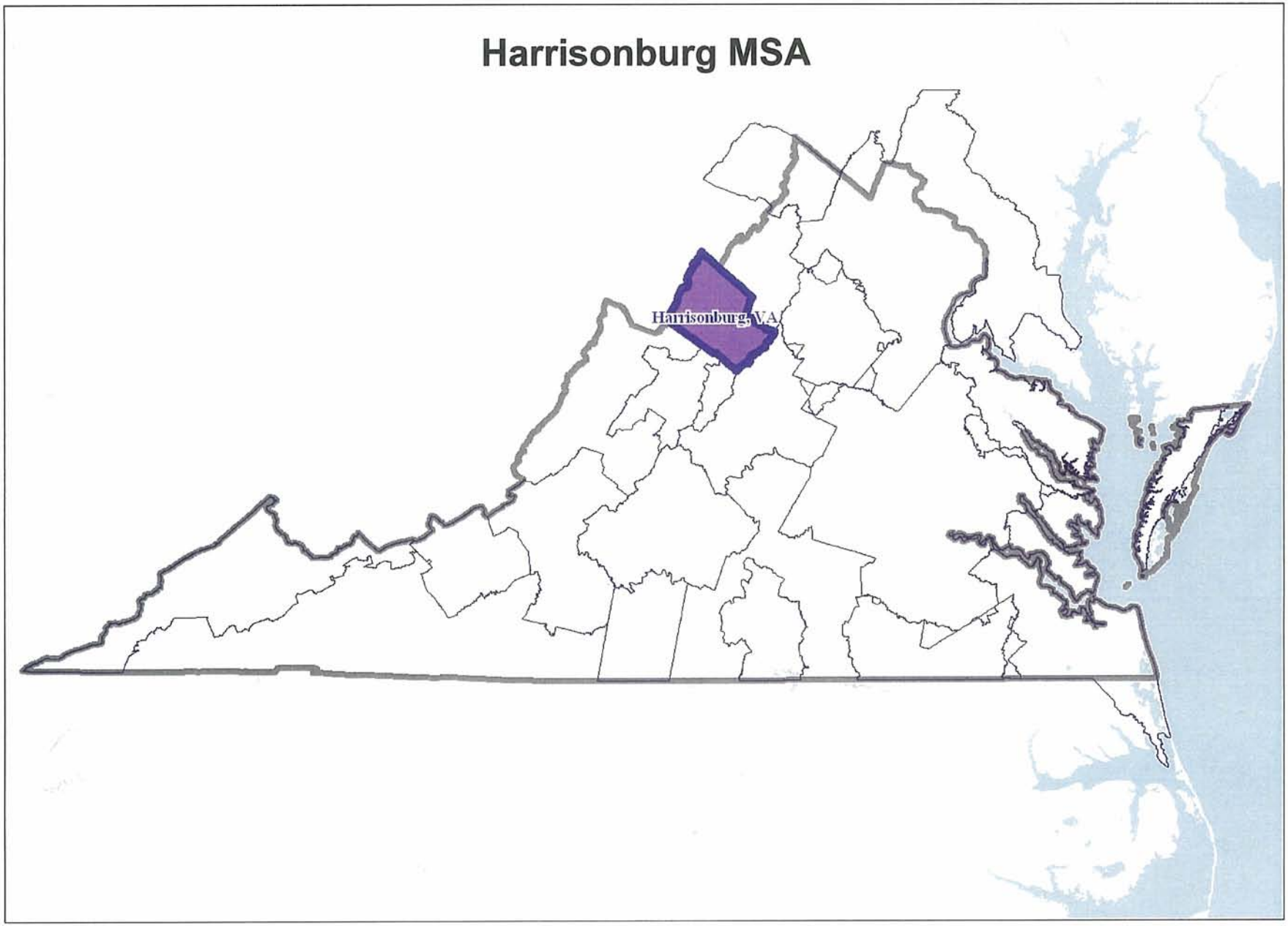
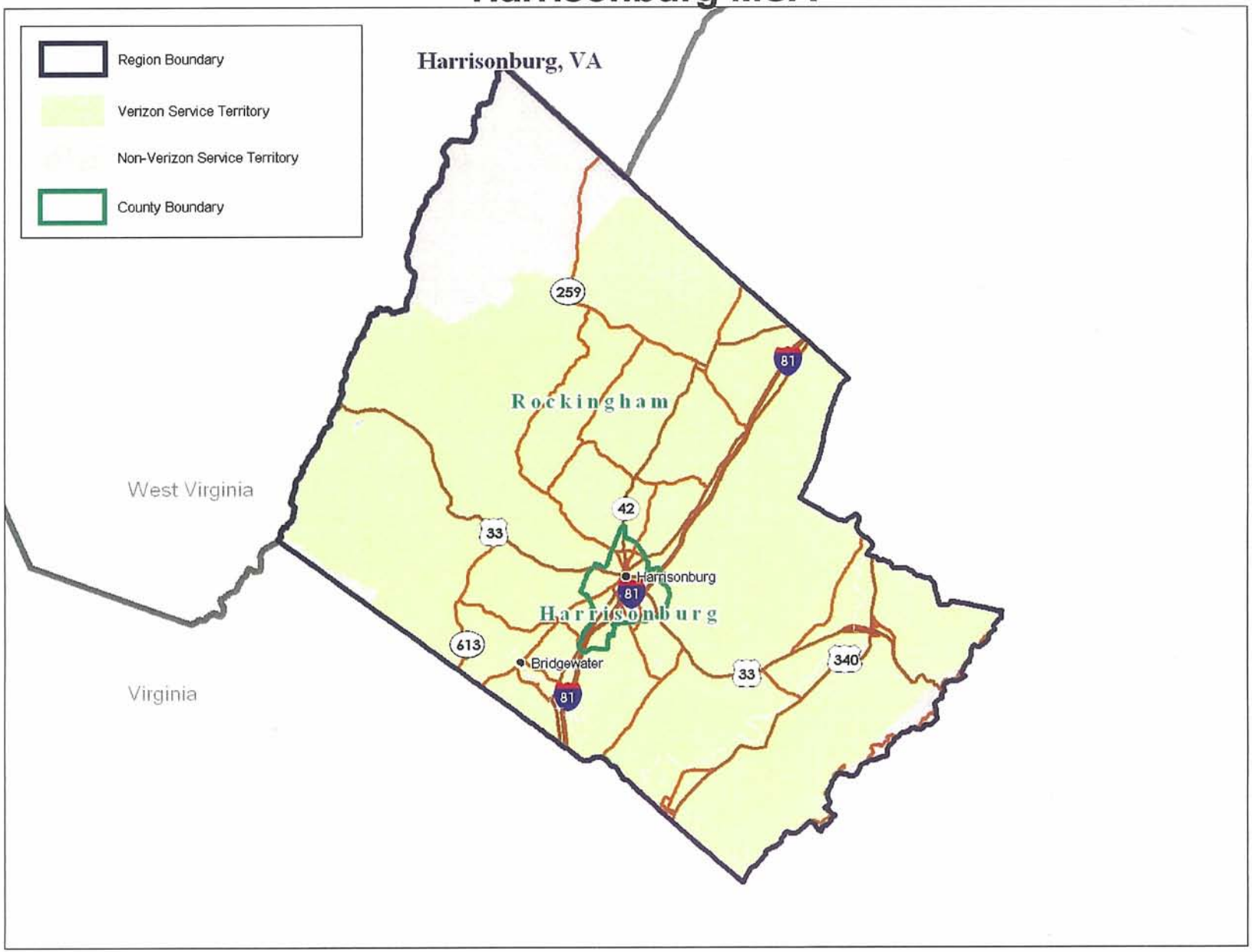
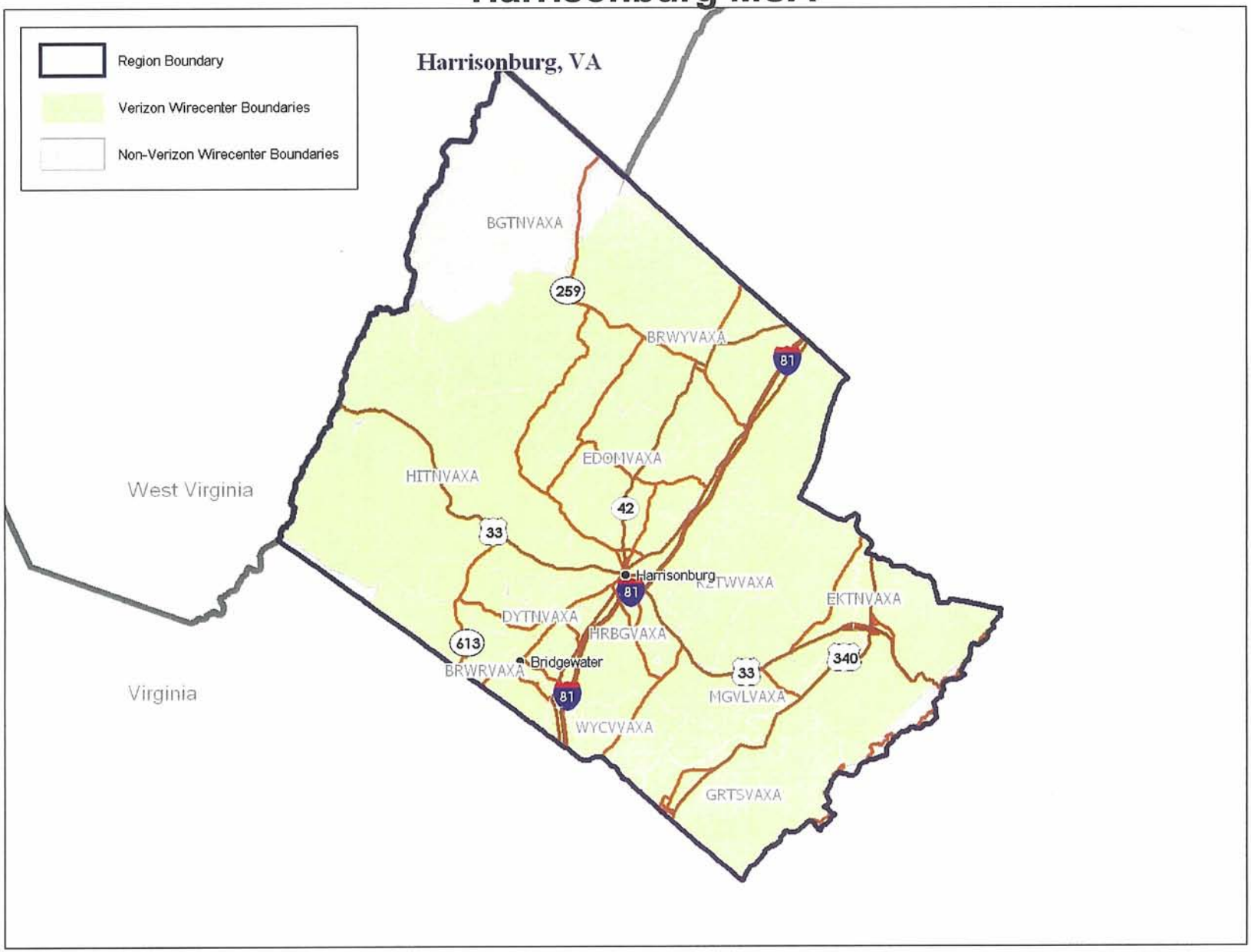

Harrisonburg MSA
Harrisonburg, VA

Harrisonburg MSA



Harrisonburg MSA



HAR-2

Exhibit HAR-2

COMPETITION AND POTENTIAL COMPETITION FOR RETAIL TELECOMMUNICATIONS SERVICES IN VERIZON'S HARRISONBURG REGION SERVICE TERRITORY

Report of Jeffrey A. Eisenach, Ph.D.
January 17, 2007

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I. OVERVIEW

Verizon's service territory in the Harrisonburg region consists of 812 square miles, with a population of 115,381 living in 40,878 households as of 2006; there are 4,602 business establishments.[1] The average population density is 142 residents per square mile, and the median household income is $44,261.[2] Verizon operates ten wire centers in the region.[3]

The Harrisonburg region is located in the 540 area code, and is contained entirely in Rockingham County. It is bordered on the northwest by West Virginia, on the southwest by Augusta County (in the Northwest Region), on the southeast by Albemarle and Greene counties (the border is Skyline Drive), on the northeast by Page and Shenandoah counties, and on the south by Nelson County. I-81 bisects the area, running from northeast to southwest, and the vast majority of the population resides along the I-81 corridor.[4] James Madison University, with 15,000 full time students, is located in Harrisonburg, and the Massanutten Resort is located 10 miles east of the city.

The region is a mix of rural and urban regions. Nine of the ten wirecenters have population densities of 175 persons per square mile or less (the least dense wirecenter, Hinton, is in the southwest portion of the region, and has a population density of 29 persons per square mile). The Harrisonburg wirecenter has a population of over 53,000, and a population density of 790 persons per square mile.[5]

Competition for telecommunications services is intense throughout the Harrisonburg region. Virtually all households and businesses have access to BLETS and OLETS from traditional CLECs and from CMRS providers. **[BEGIN CONFIDENTIAL]**

[END CONFIDENTIAL] Shentel also provides telephone services (as well as broadband and video) over its own facilities to multiple dwelling units in the region.

With respect to broadband, services are available throughout the region from multiple providers, including Comcast (formerly Adelphia), NTELOS, which provides both DSL over its own facilities and Portable Broadband wireless coverage, and multiple fixed wireless operators, including Shentel.

There are no barriers to entry. Significant entry has already occurred and more is underway. Notably, Comcast will be rolling out cable telephony in the near future, and three wireless broadband providers have recently begun providing service in the Harrisonburg MSA. Other carriers, including Shentel, which serves the only wire center in Rockingham County not

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1. *See* Exhibit HAR-4.
2. *See id.*
3. *See* Exhibit HAR-3.
4. *See* Exhibit HAR-1.
5. *See* Exhibit HAR-4.

served by Verizon (the Bergton wire center) and already provides service through its NTC subsidiary, could easily expand or initiate service in the region.

The analysis below of the availability and usage of existing alternative services, and of the conditions associated with potential competition and new entry, demonstrates that competition and potential competition regulate the prices of Verizon's retail telephony services in the Harrisonburg region, and that further entry and even more intense competition is a virtual certainty.

II. AVAILABILITY OF ALTERNATIVE SERVICES

All 40,878 households in the Harrisonburg region and all 4,602 businesses in the Harrisonburg region have the option to obtain alternatives to Verizon's BLETS, OLETS and Bundled Services from competitive providers. Facilities-based competition is widespread, and includes both traditional CLECs and cable providers, but a numerous number of CLECs also provide services through resale and/or Wholesale Advantage agreements. Mobile telephone service is ubiquitous, and broadband service is nearly so.

A. Traditional CLECs[6]

Traditional CLECs provide robust competition throughout the Harrisonburg region, and facilities-based competition is widespread.

[BEGIN CONFIDENTIAL

[END CONFIDENTIAL]

In addition to**[BEGIN CONFIDENTIAL]** **[END CONFIDENTIAL]** Shentel provides triple-play voice, data and video services to 23 off-campus housing units for students of James Madison University, through its NTC subsidiary.[9] NTC, which is headquartered in Harrisonburg, serves the Ashby Crossing, Campus Condos, College Station, Commons, Duke Gardens, Forest Hills, Fox Hill, Glenside Townhouses, Hunters Ridge, J-M Apartments, Madison Gardens, Madison Manor, Madison Square, Madison Terrace, Mountain

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6. Here and in the remaining sections of this report, unless otherwise indicated, "traditional CLEC" refers to CLECs other than cable companies. "CLEC" refers to both traditional CLECs and cable companies.
7. *See* Exhibit HAR-15 and Exhibit HAR-17. These unassignable lines are included in the aggregate competition information. This leads to some under representation of E911 lines when broken out by wire center.
8. *See* Exhibit HAR-4 and Exhibit HAR-15.
9. NTC Communications, About, http://www.ntc-com.com/content/?title=template_about_us_page (last visited Nov. 28, 2006).

View, The Mill, Pheasant Run, SouthView, Squire Hill, Stone Gate, SunChase, University Court and Westport apartment complexes.[10]

In addition, all households and businesses in the Harrisonburg region can receive service from traditional CLECs through resale and/or Wholesale Advantage services available from Verizon.[11] As of March 2006, **[BEGIN CONFIDENTIAL]**

[END CONFIDENTIAL]

Altogether, a total of **[BEGIN CONFIDENTIAL]**

[END CONFIDENTIAL][14]

B. Cable Telephony

Comcast purchased Adelphia's franchise in the Harrisonburg MSA, which covers 87.2 percent of the households.[15] As discussed below, Comcast offers cable modem service throughout its service territory, its infrastructure is capable of providing cable telephony service, and it has announced plans to deploy cable telephony on Adelphia territory in the very near future.[16]

C. Mobile Telephony

Of the 40,878 households in the Harrisonburg region, virtually 100 percent (all but 32) had access to at least one CMRS provider, and 97 percent had access to two or more carriers.[17] In

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10. James Madison University, CampusNet, http://www.jmu.edu/computing/campusnet/offcampus.shtml (last visited Nov. 28, 2006). Neither Shentel nor NTC appear in any of Verizon's internal data. Thus, Shentel's lines are not included in any of the competitive totals presented in this section. Verizon has been unable to determine what facilities Shentel is utilizing to provide these services, but the company does have access to a point of presence in Harrisonburg through its partnership with ValleyNet.
11. *See* Exhibit HAR-16.
12. *See* Exhibit HAR-15.
13. *See* Exhibit HAR-15.
14. *See* Exhibit HAR-14. Shentel/NTC is not included here as it does not appear in Verizon's internal data, though it clearly serves many more than 10 lines.
15. *See* Exhibit VA-10 and Exhibit HAR-7.
16. *See* Comcast, FAQ, https://www.comcast.com/Customers/FAQ/FaqDetails.ashx?Id=3804 (last visited Dec. 3, 2006); *id.* at https://www.comcast.com/Customers/FAQ/FaqDetails.ashx?Id=3807 (last visited Dec. 3, 2006). Also, because it offers cable television and cable modem service, it seems likely Shentel/NTC is using cable telephony technology to deliver telephone service to its MDU customers in the region, but I was not able to confirm what technology or technologies the company is using.
17. *See* Exhibit HAR-12.

addition to Verizon Wireless, there are five CMRS providers offering retail telephone services in the Harrisonburg MSA. They are Cellular One, Cingular, NTELOS, Sprint, and T-Mobile.[18]

As of 2006, there are fourteen cellular towers in the Harrisonburg region.[19] There is at least one cellular tower located in the area served by eight of the ten Verizon wire centers.[20]

D. Broadband and VoIP

Increasingly, consumers are choosing to combine stand-alone broadband Internet access with VoIP services provided by "bring your own access" companies such as Vonage, thus creating their own bundles of broadband and retail telephony services. Both broadband and VoIP services are available to at least 87 percent of Harrisonburg households from cable modem, DSL and/or wireless broadband providers.

Cable Modem and DSL Service: Comcast offers cable modem service throughout its service territories in the Harrisonburg region, serving 87.2 percent of all residences;[21] and, as noted above, Shentel/NTC offers cable modem service to 23 off-campus housing units. In addition, Verizon makes DSL service without voice available to retail customers for $26.99 per month. DSL service is available to **[BEGIN CONFIDENTIAL] [END CONFIDENTIAL]** of households.[22]

Fixed Wireless Service: In addition to wireline cable modem and DSL service, 84 percent of households have access to fixed wireless broadband services.[23] Service is provided by government entities (e.g., City of Harrisonburg) as well as by commercial providers. Providers include:

- NTELOS Portable Broadband: NTELOS offers its Portable Broadband service to 74 percent of the households in the Harrisonburg region, as shown in Figure 1[24] and in Exhibit HAR-13. NTELOS Portable Broadband is a fixed wireless service that provides users with a small external modem which is portable throughout the covered service territory. The service does not require a separate antenna or dish. It delivers speeds of up to 1.5 Mbps downstream and 550 Kbps upstream for $34.95 per month.[25]

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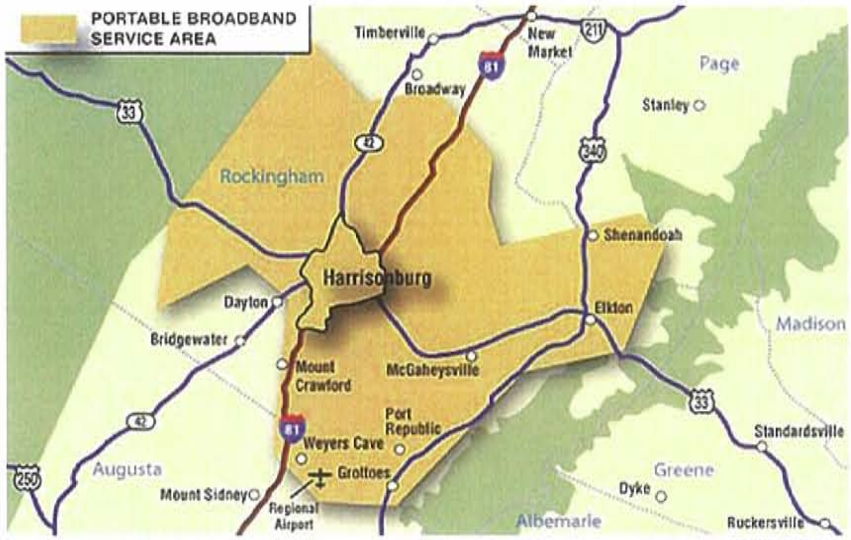
18. *See* Exhibit HAR-11.
19. *See* Exhibit HAR-10.
20. Compare Exhibits HAR-3 and HAR-10.
21. *See* Exhibit VA-10 and Exhibit HAR-8.
22. *See* Exhibit VA-4.
23. *See id.*
24. *See* NTELOS, Portable Broadband, http://www.ntelos.com/landline/!_d_busint3b.html (last visited December 15, 2006).
25. *See* NTELOS, Portable Broadband, http://www.ntelos.com/landline/residential/portablebroadband.html (last visited Nov. 22, 2006).

Figure 1: NTELOS Portable Broadband Service Territory



- City of Harrisonburg: The Harrisonburg city council has contracted with World Airwaves to create a wireless Internet service in Harrisonburg.[26] Harrisonburg's wireless Internet service will use WiFi technology, and network construction is scheduled to be completed by the end of 2006.[27] World Airwaves will pay the city of Harrisonburg a franchise fee and 20 percent of all subscription revenues.[28] World Airwaves will build a native IPv6 wireless broadband network, which will be the first of its kind in North America.[29] World Airwaves will provide a business class service ranging from 1.5 Mbps to 100 Mbps to larger commercial customers.[30]

- Town of Shenandoah: The town of Shenandoah, located on the border of Page and Rockingham counties, provides wireless broadband services to residential and small business customers throughout the town.[31] The system was funded in part by a $643,000 grant from the RUS.[32] Rates are $30 per month for 256 Kbps, $35 per month for 512 Kbps, $45 per month for 768 Kbps, $55 per month for 1 Mbps, and $65 per month for 1.5 Mbps connection speeds.[33]

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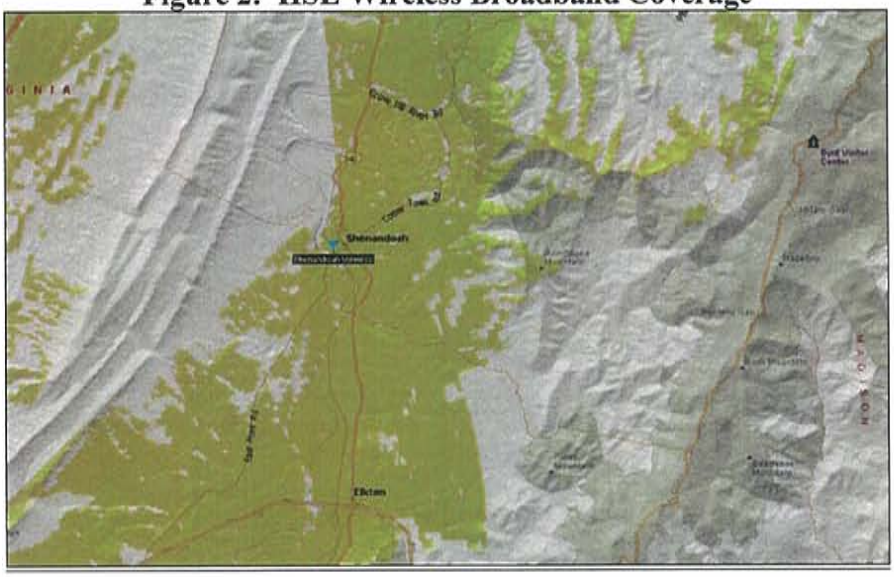
26. Calvin R. Trice, *Harrisonburg OKs Wireless Internet Deal*, RICHMOND TIMES DISPATCH, Jan. 28, 2006, at B-5.
27. *See id.*
28. *See id.*
29. Press Release, World Airwaves, World Airwaves Awarded Franchise to Build Next Generation Internet Wireless Broadband Network, by the City of Harrisonburg, VA (Feb. 8, 2006), *available at* http://www.worldairwaves.com/press.htm (last visited June 1, 2006).
30. *See id.*
31. Town of Shenandoah, Broadband Project, http://www.townofshenandoah.com/cms.php/government/departments/econdev/broadband/broadbandbackground.html (last visited Nov. 28, 2006).
32. *See id.*
33. Town of Shenandoah, Broadband Project Rates, http://www.townofshenandoah.com/cms.php/government/%20departments/econdev/broadband/index.html (last visited Nov. 28, 2006).

- HighSpeed Link Net: HighSpeed Link.Net ("HSL") offers fixed wireless broadband covering much of the eastern portion of the Harrisonburg Region from eight base stations.[34] The service ranges from 256 Kbps for $40 per month to1.5 Mbps for $80 per month.[35] HSL operates multiple towers in the region, including the eastern portion of the region (e.g., around Elkton) where cable modem service is not available, as shown in Figure 2 below.

Figure 2: HSL Wireless Broadband Coverage



While the firms discussed above do not offer bundles that include VoIP services, customers have the option of purchasing alternatives to Verizon's BLETS, OLETS and Bundled Services from by-pass VoIP companies. VoIP providers that offer telephone numbers in the 540 area code include Net2Phone, SunRocket, Packet8, and Vonage.[36]

E. Overall Availability of Alternative Platforms and Competitors

Looking overall at the availability of service from alternative platform providers (i.e., from mobile wireless, cable modem, DSL, facilities-based CLECs and fixed wireless), 100 percent of all households in the Harrisonburg Region have service available from at least one alternative platform provider and 85 percent have service from three or more alternative platforms.[37]

Similarly, looking overall at the availability of service from all competitors – i.e., the same measure as above, but counting each competitor separately (e.g., counting each CMRS

34. *See* Highspeed Link Net, Coverage, http://www.highspeedlink.net/coverage/index.htm (last visited July 21, 2006).
35. *See id.* at http://www.highspeedlink.net/ (last visited July 21, 2006).
36. *See* West Testimony at 81.
37. *See* Exhibit VA-4 and Exhibit HAR-5.

provider separately), competition is even more extensive: 100 percent of households have competitive alternatives from at least two competitors, and 91 percent have access to service from five or more Verizon competitors.[38]

III. USAGE OF ALTERNATIVE SERVICES

Verizon's internal data shows that at least **[BEGIN CONFIDENTIAL] [END CONFIDENTIAL]** of wireline telephone lines in the Harrisonburg region were being served by competitors as of March 2006, and past trends would indicate that that proportion would have increased in the intervening months. However, these figures understate the true market share of competitors, since they fail to account for intermodal competition, such as from wireless and broadband.

Survey data indicates that **[BEGIN CONFIDENTIAL]** **END CONFIDENTIAL]** of households subscribe to broadband. Taking intermodal competition into account, the data presented below show that Verizon voice lines now account for only 44 percent of all wireline telephony, wireless telephony and broadband connections in the region.

Time series data presented at the end of this section also shows that Verizon's wireline market share is falling, both in proportion to the number of wirelines served and relative to the number of households in the region. Taken together, the data presented in detail below demonstrates that the competitive alternatives described in Section II represent viable alternatives for Verizon's BLETS, OLETS and Bundled Services in the Harrisonburg region, since customers are actually switching to them in large numbers.

A. Traditional CLECs and Cable Telephony

As detailed in Exhibit HAR-15, a total of **[BEGIN CONFIDENTIAL]** **[END CONFIDENTIAL]** is not surprising, given that cable telephony service has not yet been rolled out and that Shentel's off campus housing customers are excluded from the data.

These figures are consistent with the survey data presented by Mr. Newman, which shows that **[BEGIN CONFIDENTIAL]** **[END CONFIDENTIAL]** of residential

38. *See* Exhibit VA-5 and Exhibit HAR-6.
39. This figure does not include approximately six percent of the population (who by definition were not reached through Verizon's telephone survey) who have cut the cord altogether. *See* West Testimony at 63.
40. *See* Exhibit HAR-15.
41. *See* Exhibit HAR-19. (These data do not include lines served by Shentel in off-campus housing units.)

customers in the Harrisonburg region are using providers other than Verizon.[42] In small MSAs (including the Harrisonburg region), the survey data shows that 20.3 percent of POTS business customers and 29.9 percent of all business customers are using other providers.[43]

Exhibit HAR-15 also demonstrates that wireline competition is ubiquitous throughout the Harrisonburg region. It shows that competitors are actually serving both business and/or residential customers in **[BEGIN CONFIDENTIAL] [END CONFIDENTIAL]**of the ten wire centers in the Harrisonburg region, including the smallest and most rural wire centers.[44] Furthermore, facilities-based competition is also widespread. Traditional CLECs using their own facilities are serving customers in **[BEGIN CONFIDENTIAL] . [END CONFIDENTIAL]** of the ten wire centers.[45] These data demonstrate that alternatives to Verizon's BLETS, OLETS and Bundled Services from wireline competitors are available and in widespread use by both residential and enterprise customers throughout the Harrisonburg region.

B. Mobile Telephony

The survey data presented by Mr. Newman shows that **[BEGIN CONFIDENTIAL] . [END CONFIDENTIAL]** of households in the Harrisonburg region purchase telephone service from mobile telephone companies.[46] Moreover, **[BEGIN CONFIDENTIAL]**

[END CONFIDENTIAL][47]

While Mr. Newman's testimony does not provide data on business usage of mobile telephones specifically for the Harrisonburg MSA, it does indicate that the proportion of businesses in small MSAs (including the Harrisonburg region) which purchase mobile telephone service is percent 50.8 percent, and that 15.5 percent of business respondents consider their mobile telephone to be their primary means of voice communication.[48]

These figures do not include mobile telephone customers who have dropped their wireline service altogether, as these customers were not eligible for the telephone survey. As

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42. *See* Exhibit VA-21.
43. *See* Exhibit VA-20.
44. *See* Exhibit HAR-15.
45. *See id.*
46. *See* Exhibit VA-21. Because the survey upon which Mr. Newman's estimates are based was conducted during the summer, when school was not in session, it likely underestimates the percentage of residential customers using competitive services, since college students are certainly under-represented in the results. We know that many students are using Shentel/NTC services, and, as Mr. West demonstrates, national data show students have high rates of reliance on mobile phones. In addition, a 2006 survey of JMU students showed that nearly four in ten reported they had "no basis to judge" the university's telephone services, suggesting they are using other (i.e., wireless, VoIP) alternatives. See James Madison University, Technology Satisfaction Survey 2006, Student Responses (available at http://www.jmu.edu/computing/af/student.pdf). The survey also showed that 42 percent of all students surveyed used Shentel/NTC for off-campus internet access.
47. *See id.*
48. *See* Exhibit VA-20.

Mr. West's testimony indicates, national estimates suggest that approximately six percent of residential customers have "cut the cord."[49]

These figures demonstrate that the mobile wireless alternatives available to consumers in the Harrisonburg region function are actual, viable alternatives to Verizon's BLETS, OLETS and Bundled Services.

C. Broadband and VoIP

The survey data presented by Mr. Newman show that **[BEGIN CONFIDENTIAL]**

. [END CONFIDENTIAL][50]

The fact that cable modem subscribers outnumber DSL subscribers by nearly two-to-one demonstrates that cable modem has proven to be the more attractive option for most consumers in this region than DSL, an indication that Comcast is well positioned to capture a substantial market share when it rolls out its cable telephony service.

The survey data presented by Mr. Newman show that in small MSAs in Virginia (including the Harrisonburg region), 59.1 percent of businesses subscribe to high-speed broadband service.[51]

These overall usage rates for broadband demonstrate that the broadband plus VoIP "build your own bundle" option is available today to approximately **[BEGIN CONFIDENTIAL] END CONFIDENTIAL]** of all residential consumers and nearly six in ten businesses, which already subscribe to broadband service.

D. Overall Penetration of Wireline and Intermodal Competition

While it is not possible to estimate precisely the number of lines Verizon has lost to wireline and intermodal competitors, it is clear that competition is having a significant impact on Verizon's market share, both in terms of wireline telephony and the overall markets for BLETS, OLETS and bundled services, and that wireline competitors are winning a growing proportion of customers. The data also indicate that intermodal competitors are winning a growing proportion of customers from wireline carriers of all types (i.e., including both Verizon and the traditional CLECs and cable telephony providers).

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49. *See* West Testimony at 65.
50. *See* Exhibit VA-21. Because the survey was conducted during the summer months when few students were present, and because 100 percent of JMU students living on campus or in off-campus housing have broadband service, it is likely these numbers significantly understate the actual level of both Internet and broadband penetration; also, because the Shentel/NTC customers use cable modem service, the results also understate the percentage using cable modem service relative to DSL.
51. *See* Exhibit VA-20.

Both Verizon's line count and its wireline market share in the Harrisonburg region are dropping rapidly. As indicated in Figure 3 below, between December 2003 and March 2006 (i.e., in 27 months), the ratio of Verizon lines to households fell from **[BEGIN CONFIDENTIAL]**

[END CONFIDENTIAL][53]

During this same 27-month period, the total number of wirelines served by wireline CLECs rose by **[BEGIN CONFIDENTIAL]**

[END CONFIDENTIAL][54]

Figure 3 also demonstrates the significance of intermodal competition from wireless telephony and from broadband plus VoIP "build your own" bundles. It shows that the ratio of combined Verizon and CLEC residential lines to households fell from **[BEGIN CONFIDENTIAL]**

. **[END CONFIDENTIAL]**[55] Assuming people have not stopped using voice telephony altogether, these data clearly indicate that wireless and broadband providers are competing effectively with both Verizon and other traditional wireline providers – a conclusion which is consistent with the high rates of wireless telephony usage and broadband adoption discussed in above.

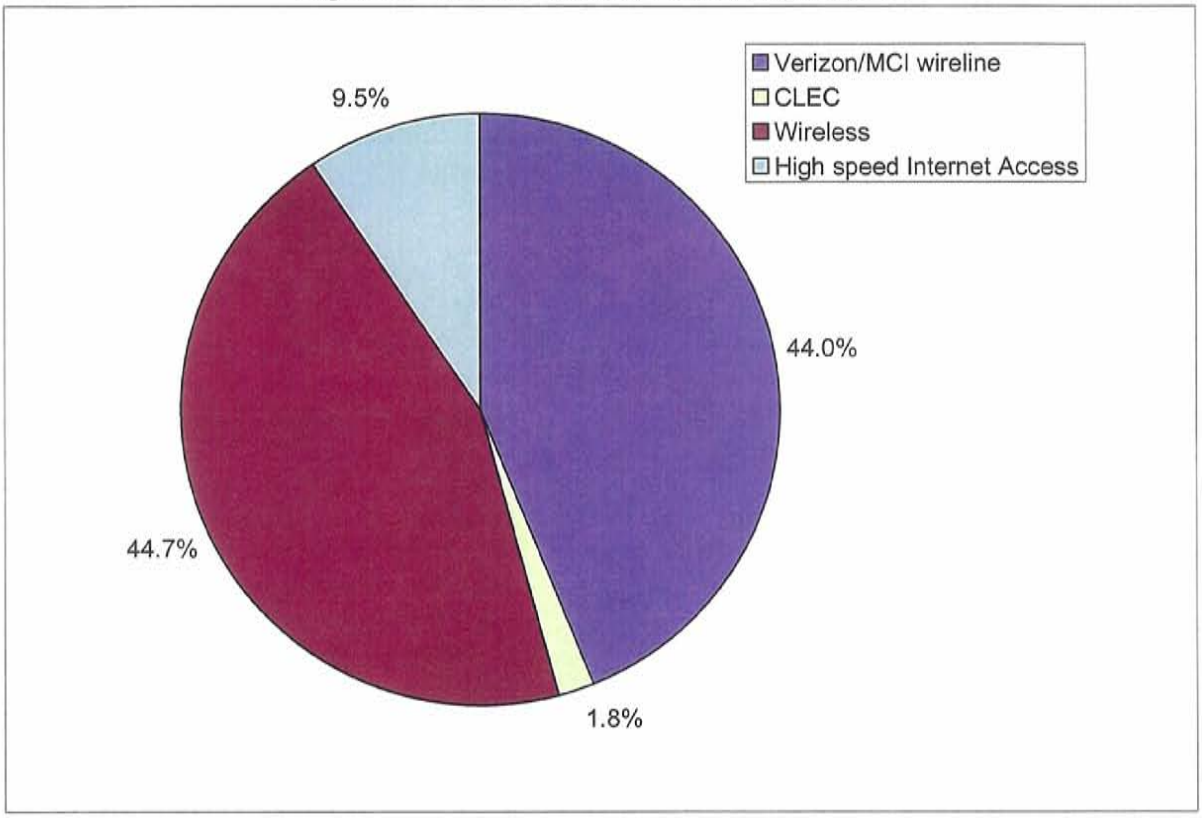
[BEGIN CONFIDENTIAL]

[END CONFIDENTIAL]

52. *See* Exhibit HAR-19.
53. *See id.*
54. *See id.*
55. *See id.*
56. *See id.*

Another perspective on Verizon's loss of overall share is shown in Figure 4 below, which shows the percentage of total connections – including wireline telephony, wireless telephony and broadband connections – served by Verizon, based on the survey conducted by Mr. Newman. As the figure shows, Verizon voice lines now account for only 44.0 percent of all wireline telephony, wireless telephony and broadband connections.[57]

Figure 4: Verizon Share of Total Connections



IV. POTENTIAL COMPETITION AND ENTRY

While it is clear from the evidence presented above that actual competition already in the marketplace is extensive, even in the absence of additional entry, it is equally clear that entry has occurred, is occurring and is likely to continue occurring in the future. Competition in the Harrisonburg region is thus certain to become even more intense in the coming months and years.

First, Comcast has not yet deployed cable telephony in the region, but its plant is fully upgraded and capable of supporting the service, and the company has announced its plans to roll

57. *See* Exhibit VA-22.

out the service in the near future.[58] Once the rollout is complete, 87.2 percent of all households in the Harrisonburg region will have access to cable telephony.[59]

Second, the record of rapid entry – by NTELOS and its portable broadband service, by Shentel and NTC, and by fixed wireless providers such as HSL – demonstrates that entry is economically viable. Facilities-based companies are also well-positioned to expand their offerings. **[BEGIN CONFIDENTIAL]**

[END CONFIDENTIAL]

CLECs are well positioned to rapidly expand their services in the Harrisonburg region. Non-facilities based companies, who provide services using resale and/or Wholesale Advantage services purchased from Verizon, are completely unconstrained in their ability to expand services.

More broadly, barriers to entry in the Harrisonburg region are extremely low. The Harrisonburg region has extensive access to high-capacity fiber optic capacity from competitive providers. For example, Cavalier, Continental VisiNet, NTELOS, and Valley Net all operate points of presence in the region.[60] There are already six CMRS providers serving the Harrisonburg region and the widespread presence of cell towers throughout the region (there are towers in eight of the ten wire center areas) means that the mobile and fixed wireless entry is also inexpensive. Finally, a significant portion of the land area is rural, and thus potentially eligible for funding from the RUS.

V. CONCLUSION

Competition for retail telephone services in the Harrisonburg MSA is intense and certain to become more intense in coming years. By every measure, Verizon is already losing customers to traditional CLECs and intermodal competitors at a rapid pace, and this decline is taking place *at current prices.* Comcast is in a position to begin providing cable telephony service to nearly nine out of ten households, and in fact has announced its intention to do so within a year. Once it does, its two-to-one lead over Verizon in providing broadband service will give it a significant competitive advantage. If Verizon were to raise prices, it would both accelerate the rate at which it is losing customers to existing competitive services,[61] and increase the rate at which competitors and potential competitors deploy new services in the market. The current state of competition, combined with the imminent threat of region-wide entry by cable telephony and the ability of other actual and potential competitors rapidly to enter or expand their offerings, is fully adequate to regulate the price of Verizon's retail telephone services in this region.

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58. *See* West Testimony at 42. *See also* Comcast, FAQ, https://www.comcast.com/Customers/FAQ/FaqDetails.ashx?Id=3804 (last visited Dec. 3, 2006); *id.* at https://www.comcast.com/Customers/FAQ/FaqDetails.ashx?Id=3807 (last visited Dec. 3, 2006).
59. *See* Exhibit VA-10.
60. *See* Eisenach Testimony at III.B. and Exhibit VA-18.
61. An analysis conducted by Mr. Taylor estimates that a decision by Verizon to raise prices by 5 percent in the Harrisonburg MSA would result in a *net* revenue loss of **[BEGIN CONFIDENTIAL] [END CONFIDENTIAL]** annually. *See* Taylor Testimony, Table 14 at 94.

HAR-3

Wire Centers by Rate Group, Exchange, City and County

REGION	LOC ST	WIRECENTER	LOCATION NAME	Rate Group	Exchange	CENTRAL OFFICE CITY	COUNTY
HARRISONBURG, VA	VA-S	BRWRVAXA	BRIDGEWATER	08	BRIDGEWATER	BRIDGEWATER	Rockingham
		BRWYVAXA	BROADWAY	08	BROADWAY	BROADWAY	Rockingham
		DYTNVAXA	DAYTON	08	DAYTON	DAYTON	Rockingham
		EDOMVAXA	EDOM	07	EDOM	LINVILLE	Rockingham
		EKTNVAXA	ELKTON	08	ELKTON	ELKTON	Rockingham
		GRTSVAXA	GROTTOES	08	GROTTOES	GROTTOES	Rockingham
		HITNVAXA	HINTON	08	HINTON	HINTON	Rockingham
		HRBGVAXA	HARRISONBURG	07	HARRISONBURG	HARRISONBURG	Harrisonburg City
		KZTWVAXA	KEEZLETOWN	07	KEEZLETOWN	KEEZLETOWN	Rockingham
		MGVLVAXA	MCGAHEYSVILLE	08	MCGAHEYSVILLE	MCGAHEYSVILLE	Rockingham

HAR-4

CONFIDENTIAL

Exhibit HAR-4

HAR-5

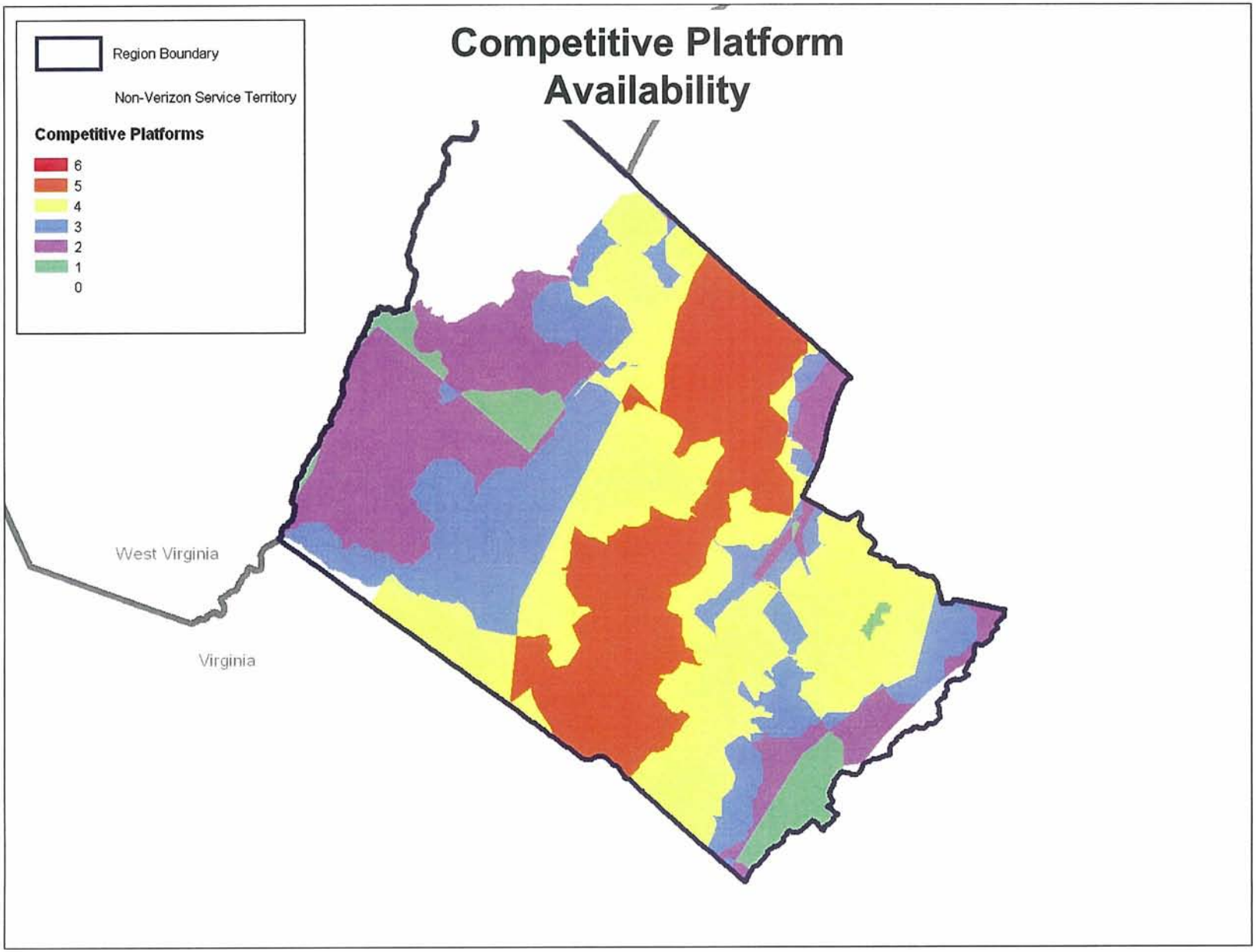


Exhibit HAR-5

HAR-6

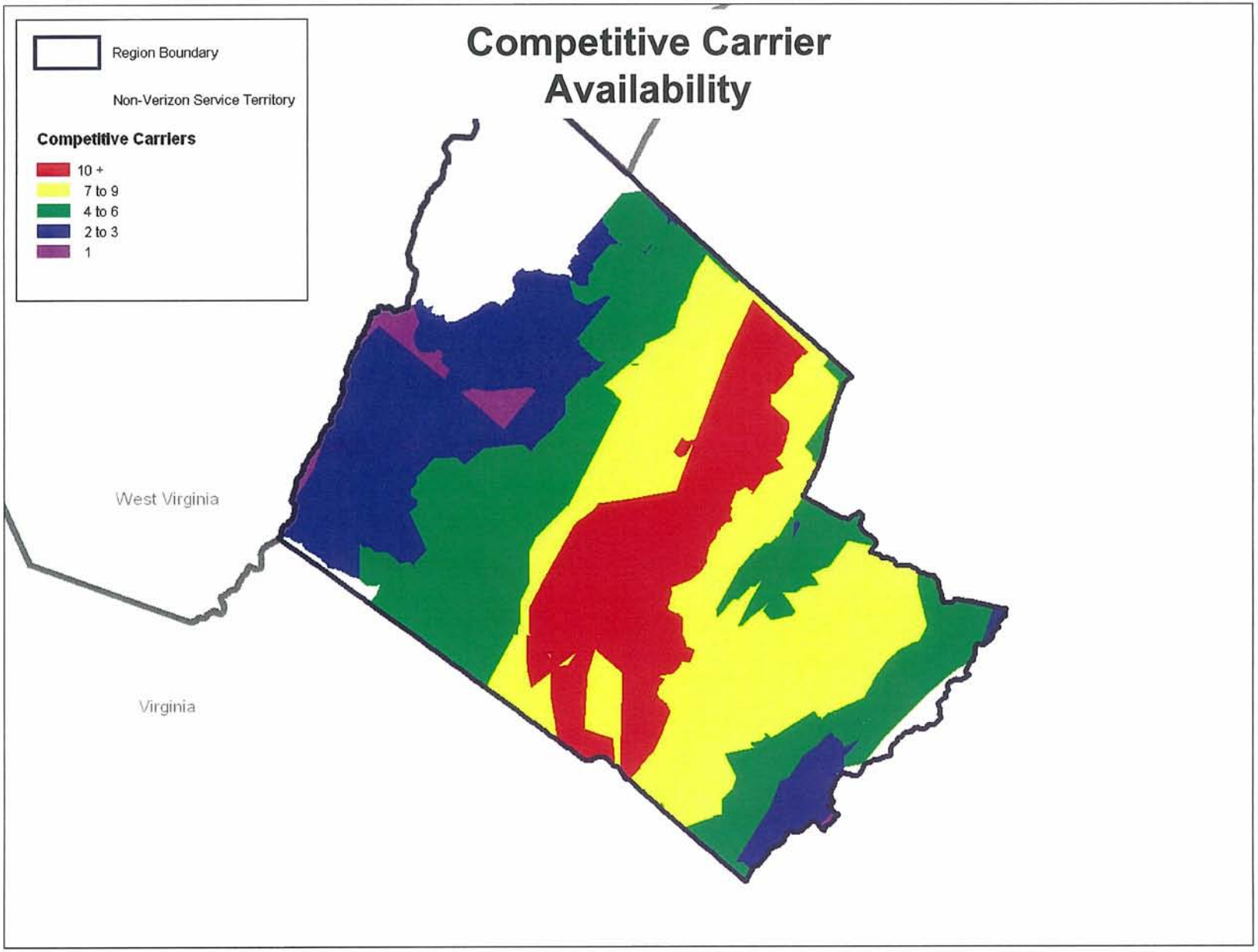


Exhibit HAR-6

HAR-7

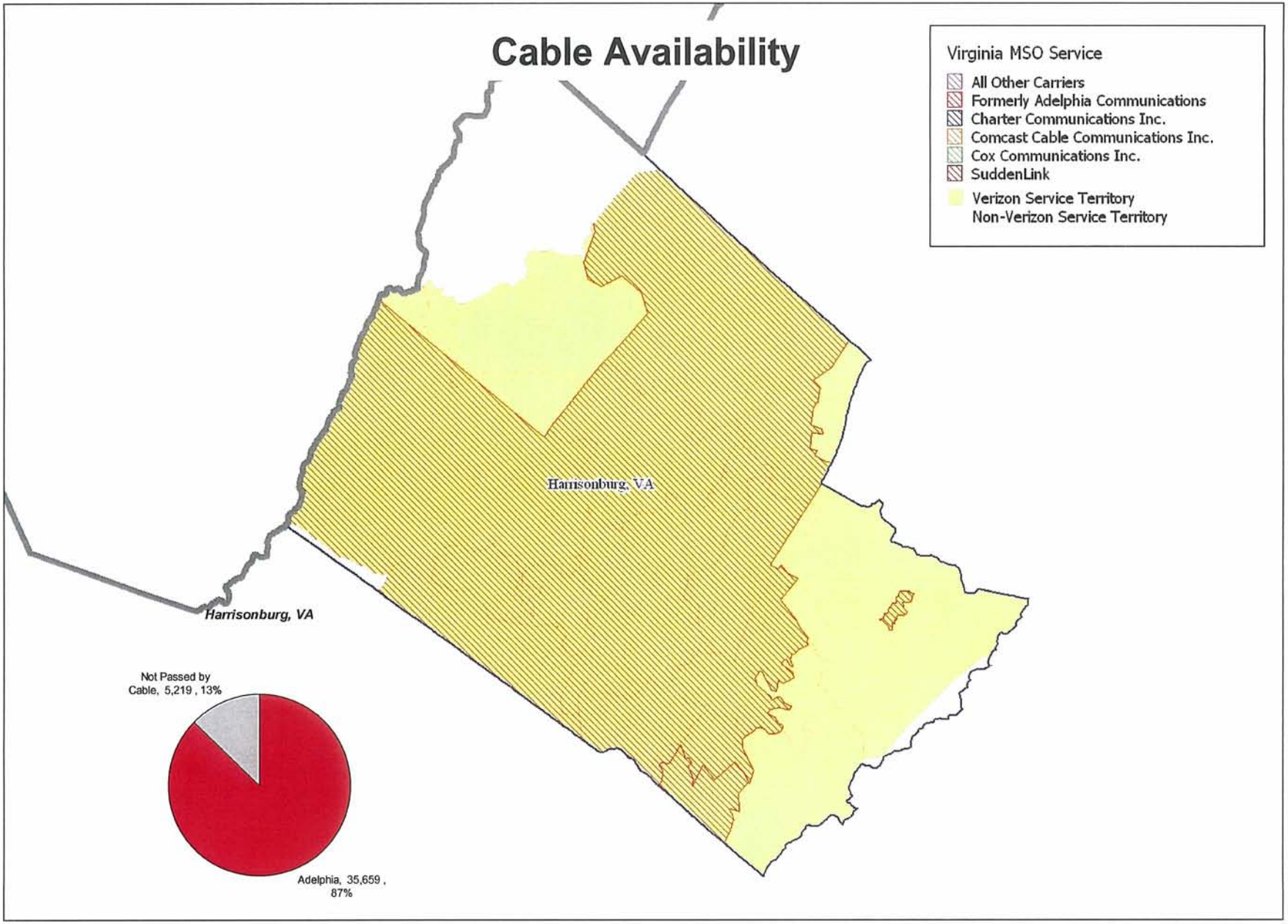


Exhibit HAR-7

Note: HH numbers reflect only those households in Verizon's Service Territory

HAR-8

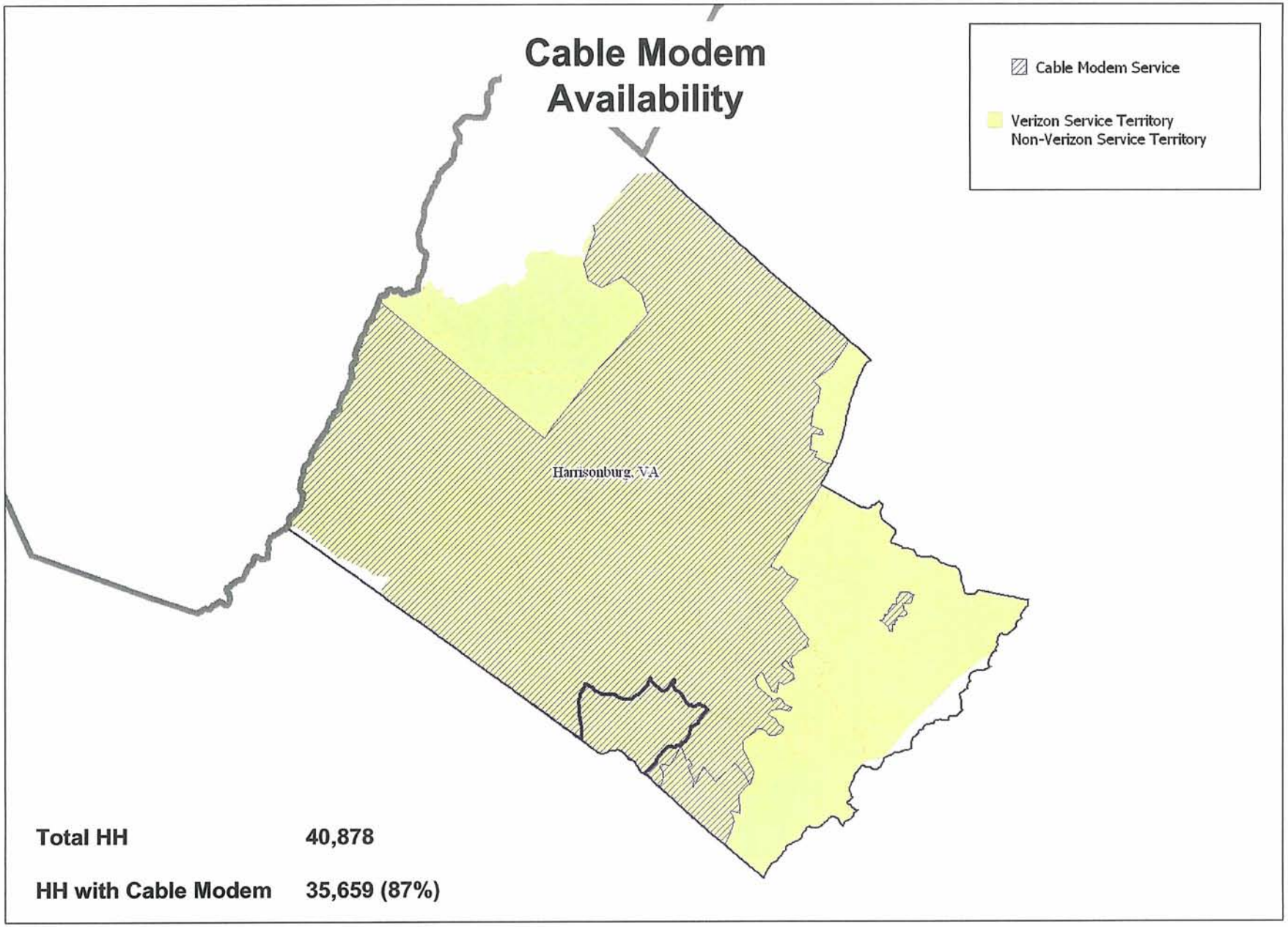


Exhibit HAR-8

Note: HH numbers reflect only those households in Verizon's Service Territory

HAR-9

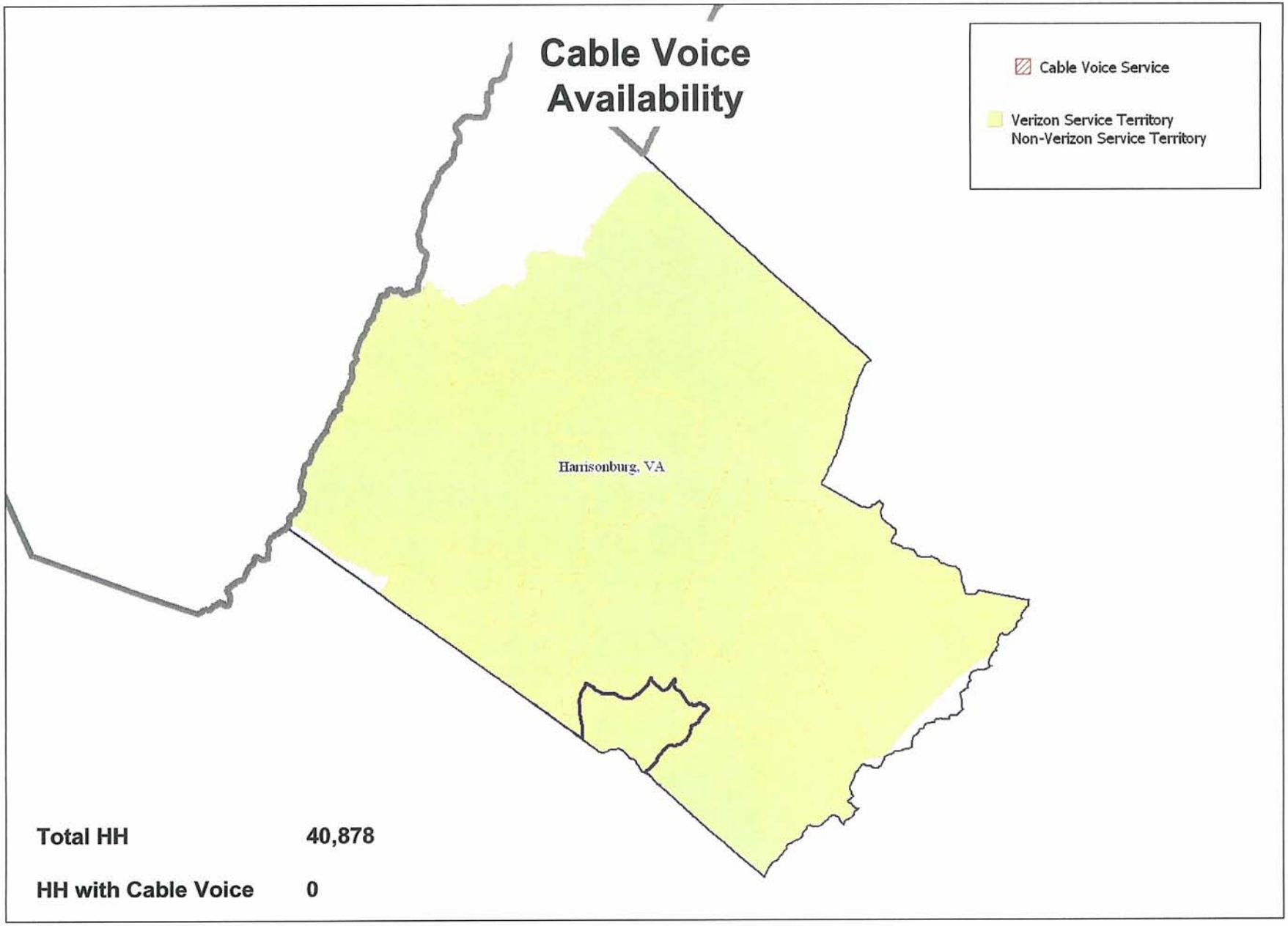


Exhibit HAR-9

Note: HH numbers reflect only those households in Verizon's Service Territory

HAR-10

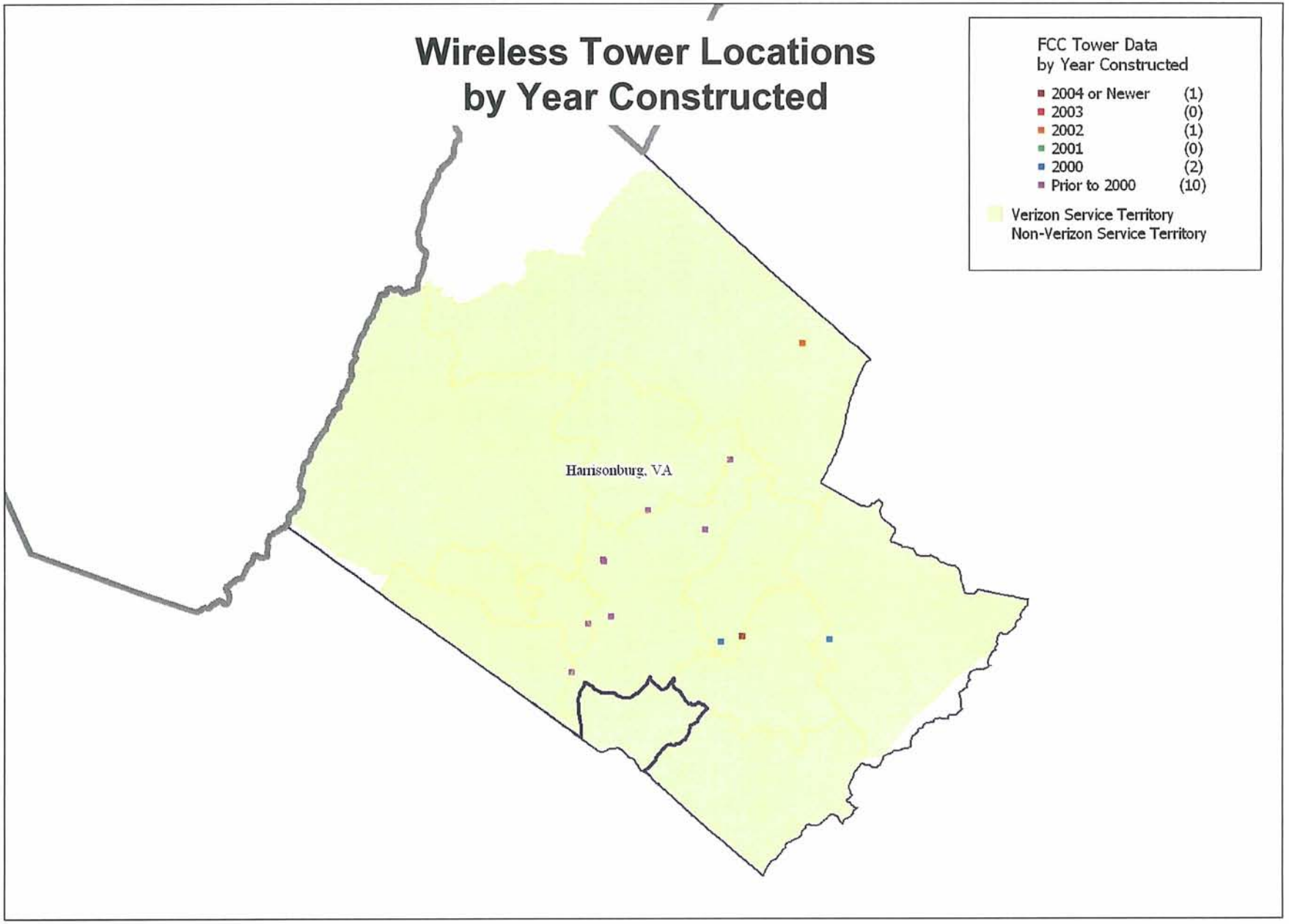
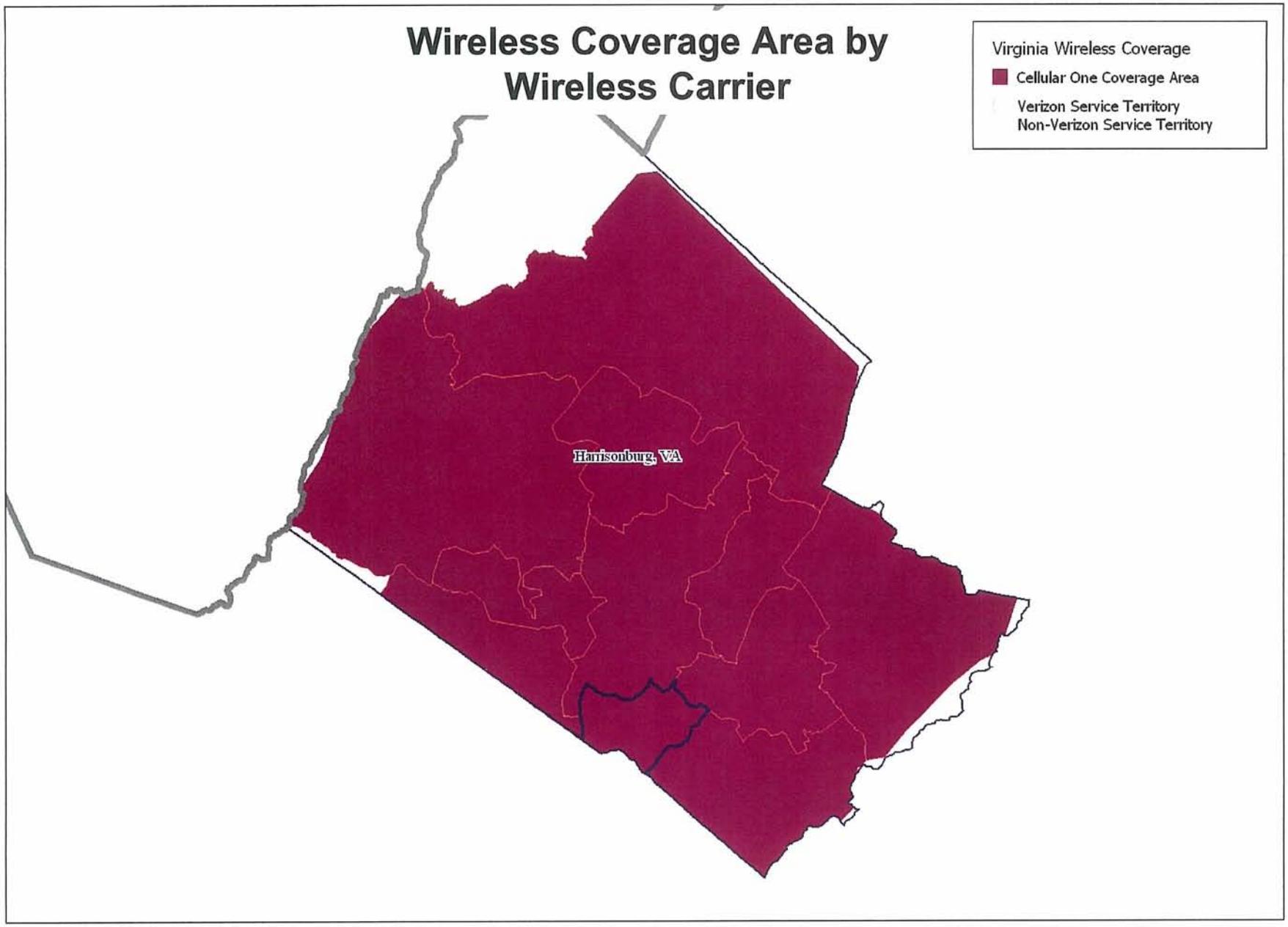
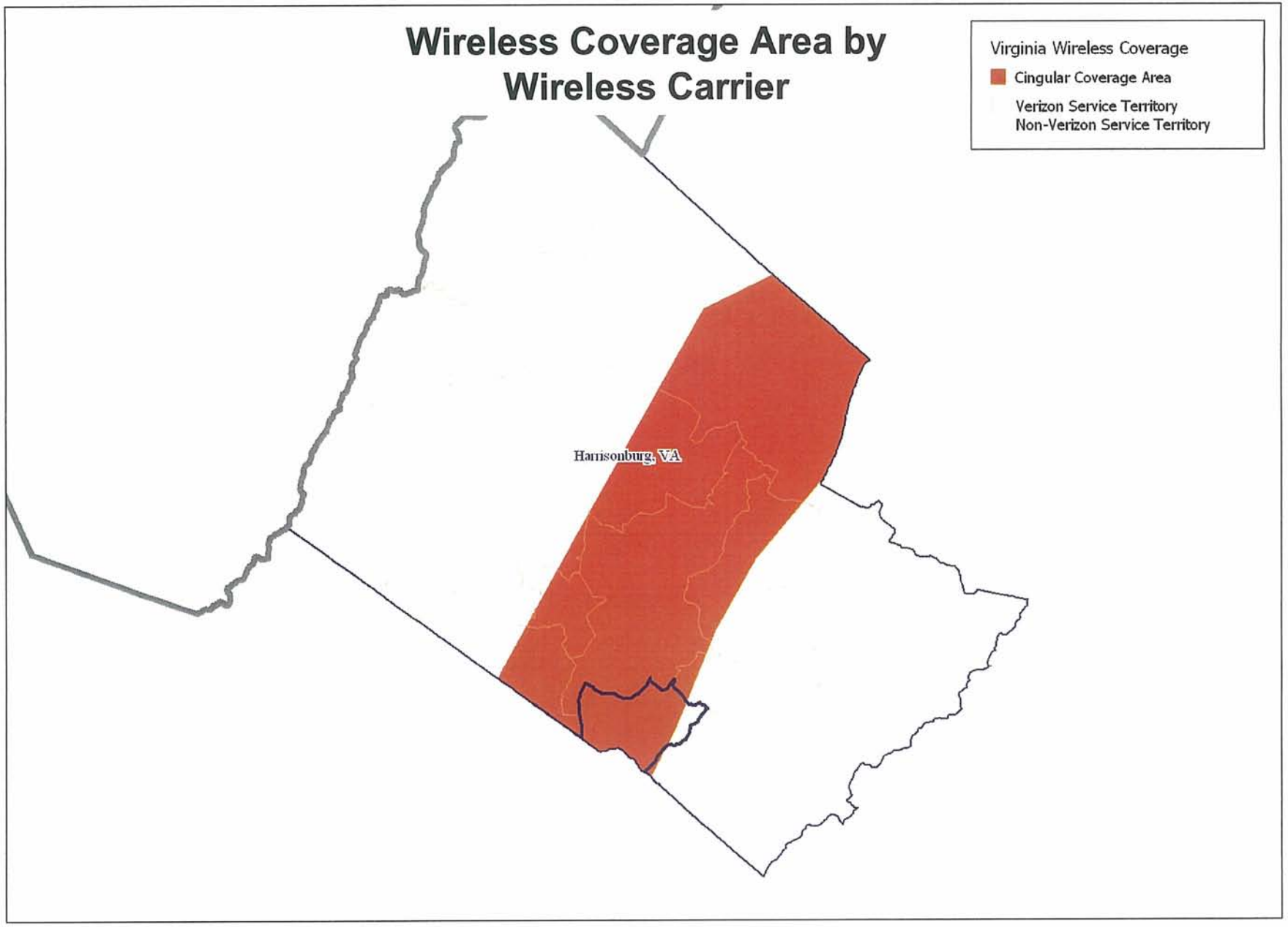
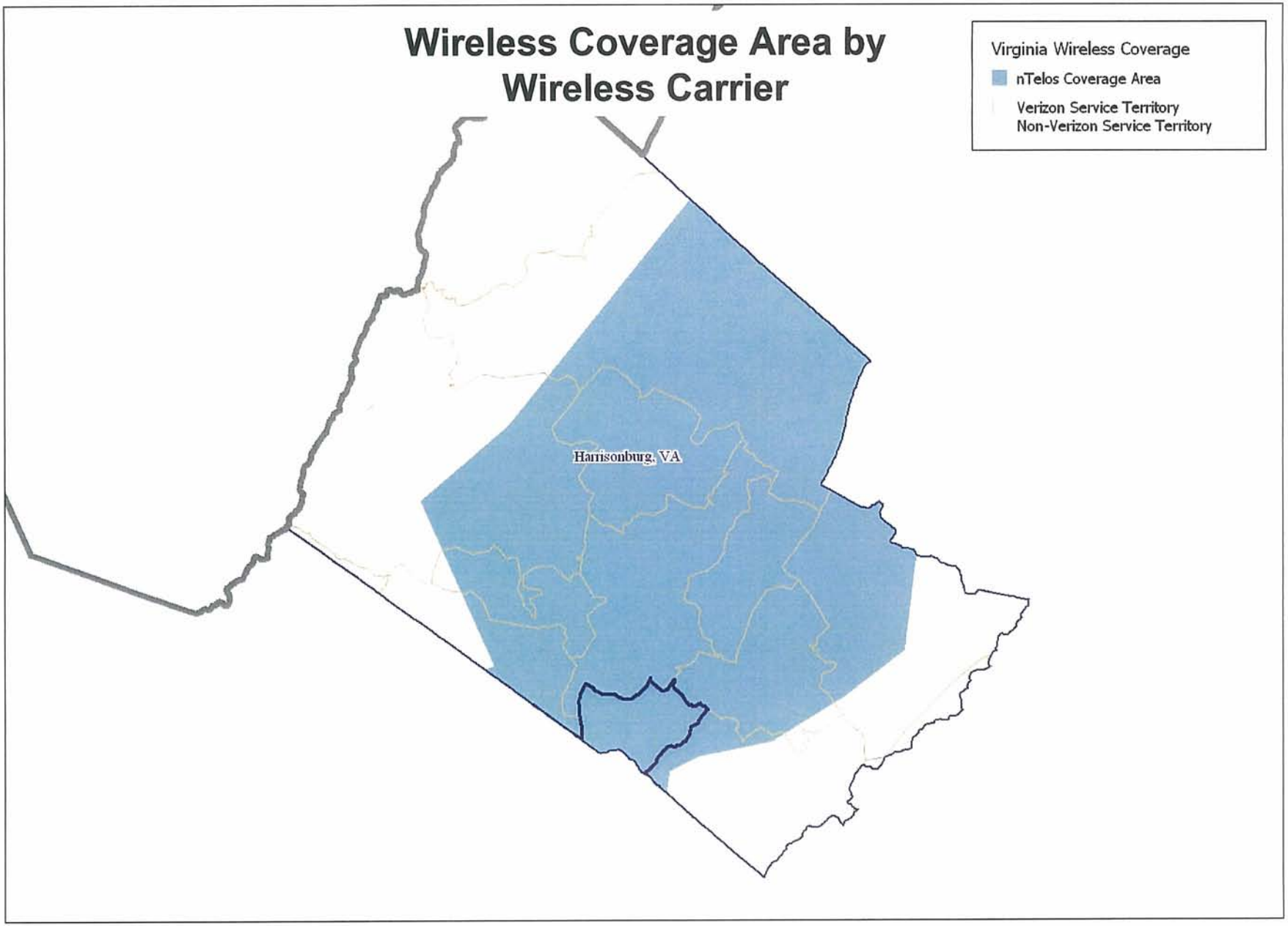


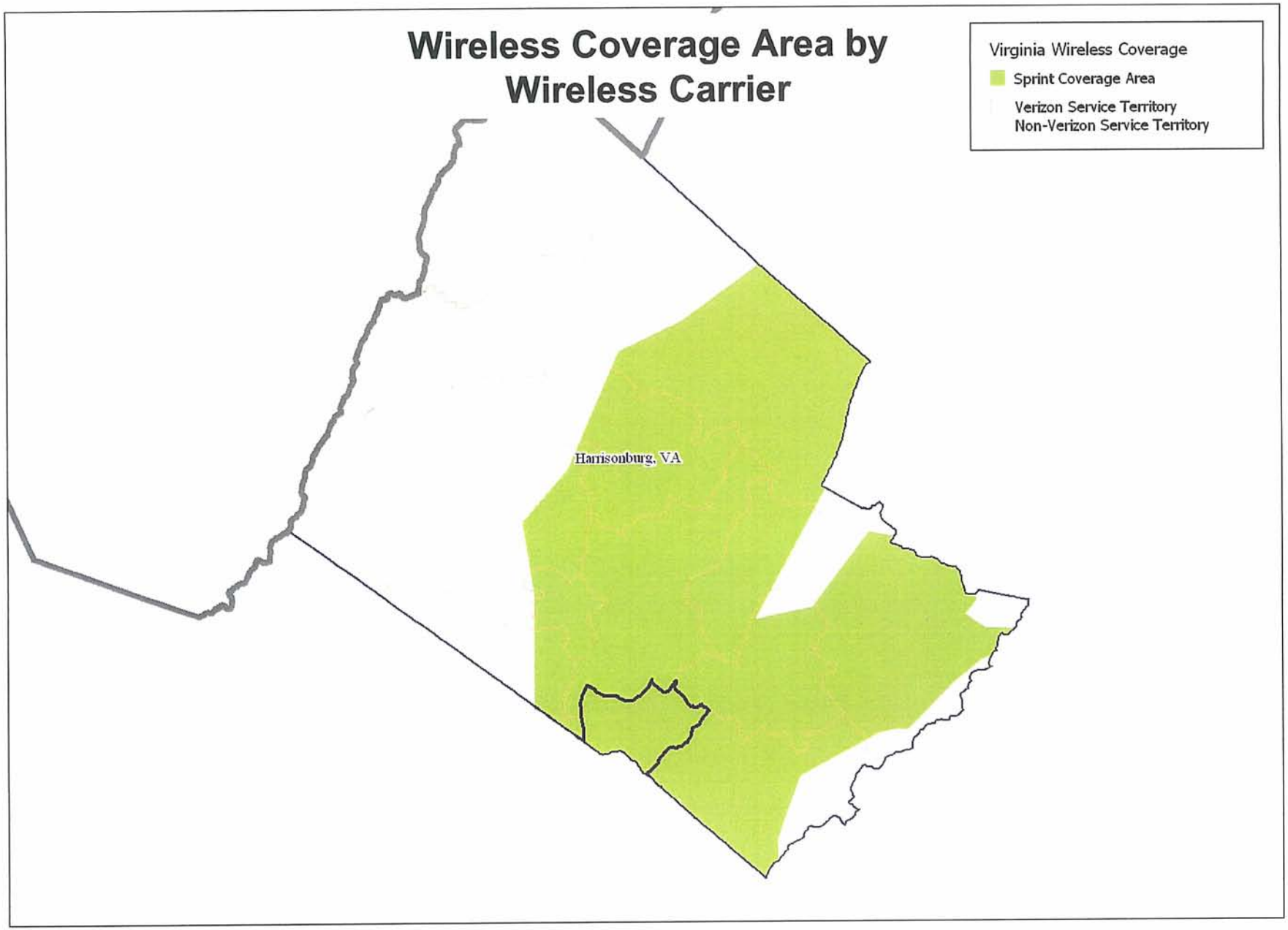
Exhibit HAR-10

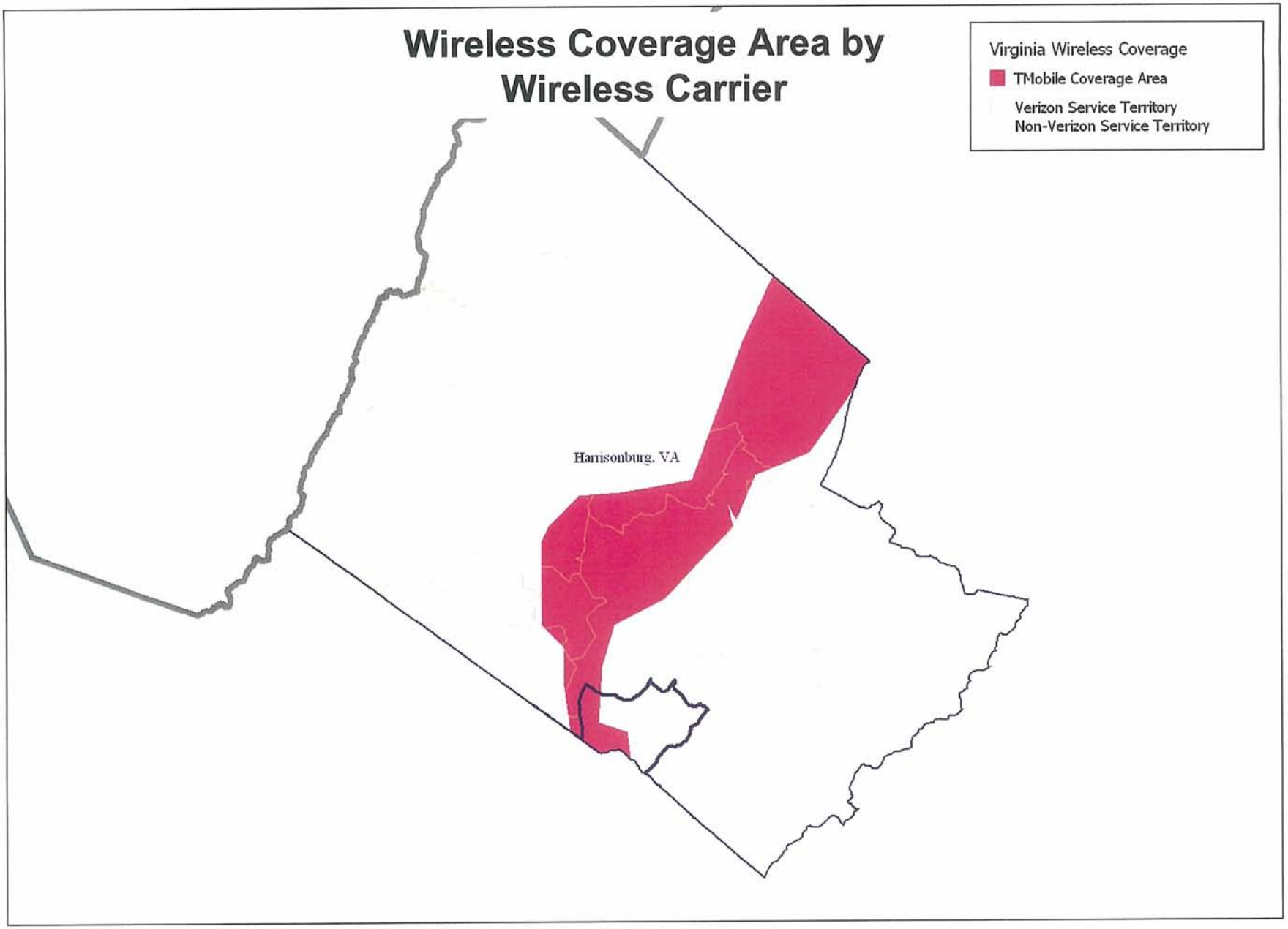
HAR-11

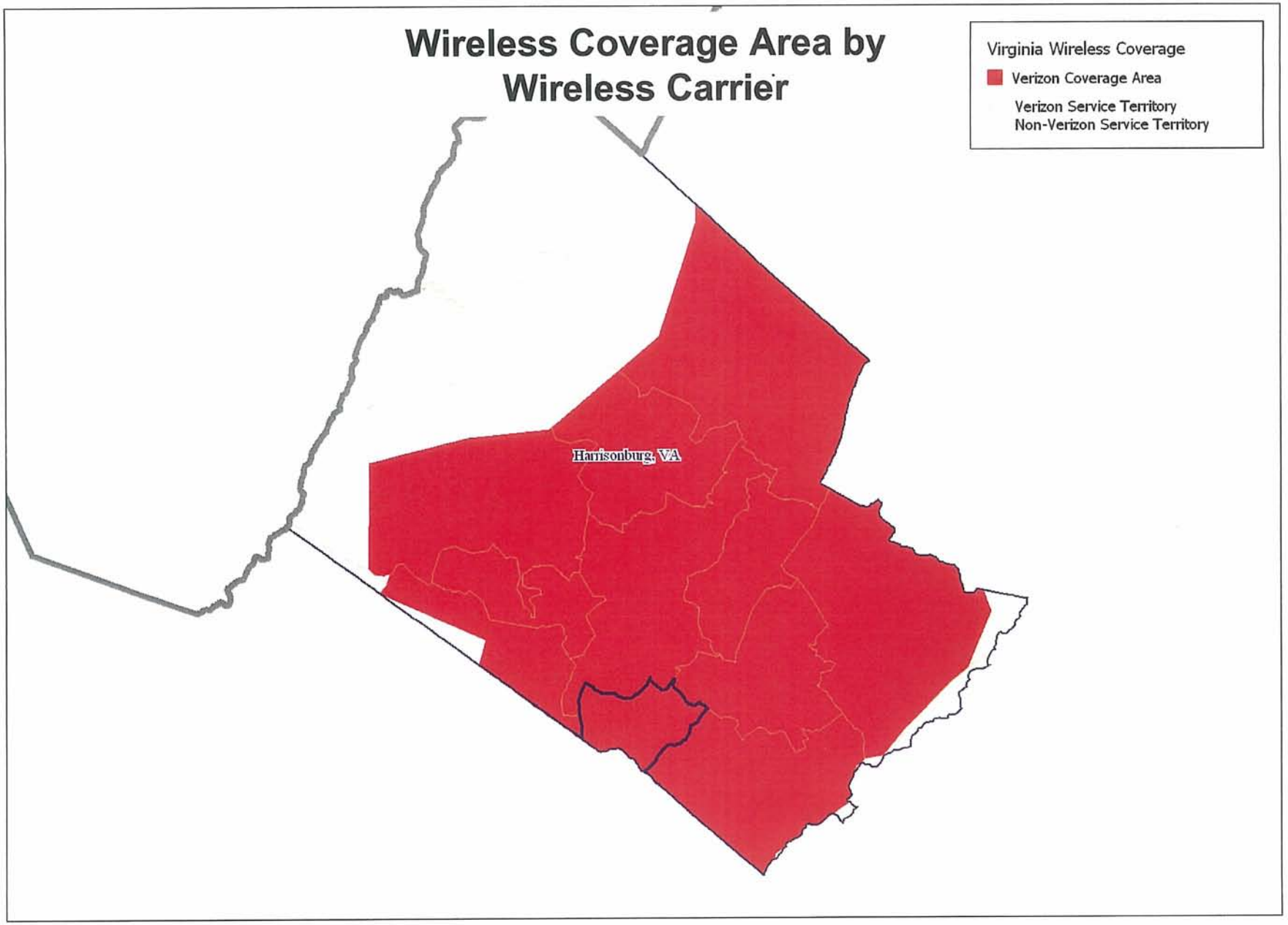

Wireless Coverage Area by
Wireless Carrier
Virginia Wireless Coverage
Cellular One Coverage Area
Verizon Service Territory
Non-Verizon Service Territory
Harrisonburg, VA


Wireless Coverage Area by
Wireless Carrier
Virginia Wireless Coverage
Cingular Coverage Area
Verizon Service Territory
Non-Verizon Service Territory
Harrisonburg, VA


Wireless Coverage Area by Wireless Carrier
Virginia Wireless Coverage
nTelos Coverage Area
Verizon Service Territory
Non-Verizon Service Territory
Harrisonburg, VA


Wireless Coverage Area by Wireless Carrier
Virginia Wireless Coverage
Sprint Coverage Area
Verizon Service Territory
Non-Verizon Service Territory
Harrisonburg, VA


Wireless Coverage Area by
Wireless Carrier
Virginia Wireless Coverage
TMobile Coverage Area
Verizon Service Territory
Non-Verizon Service Territory
Harrisonburg, VA


Wireless Coverage Area by
Wireless Carrier
Virginia Wireless Coverage
Verizon Coverage Area
Verizon Service Territory
Non-Verizon Service Territory
Harrisonburg, VA

HAR-12

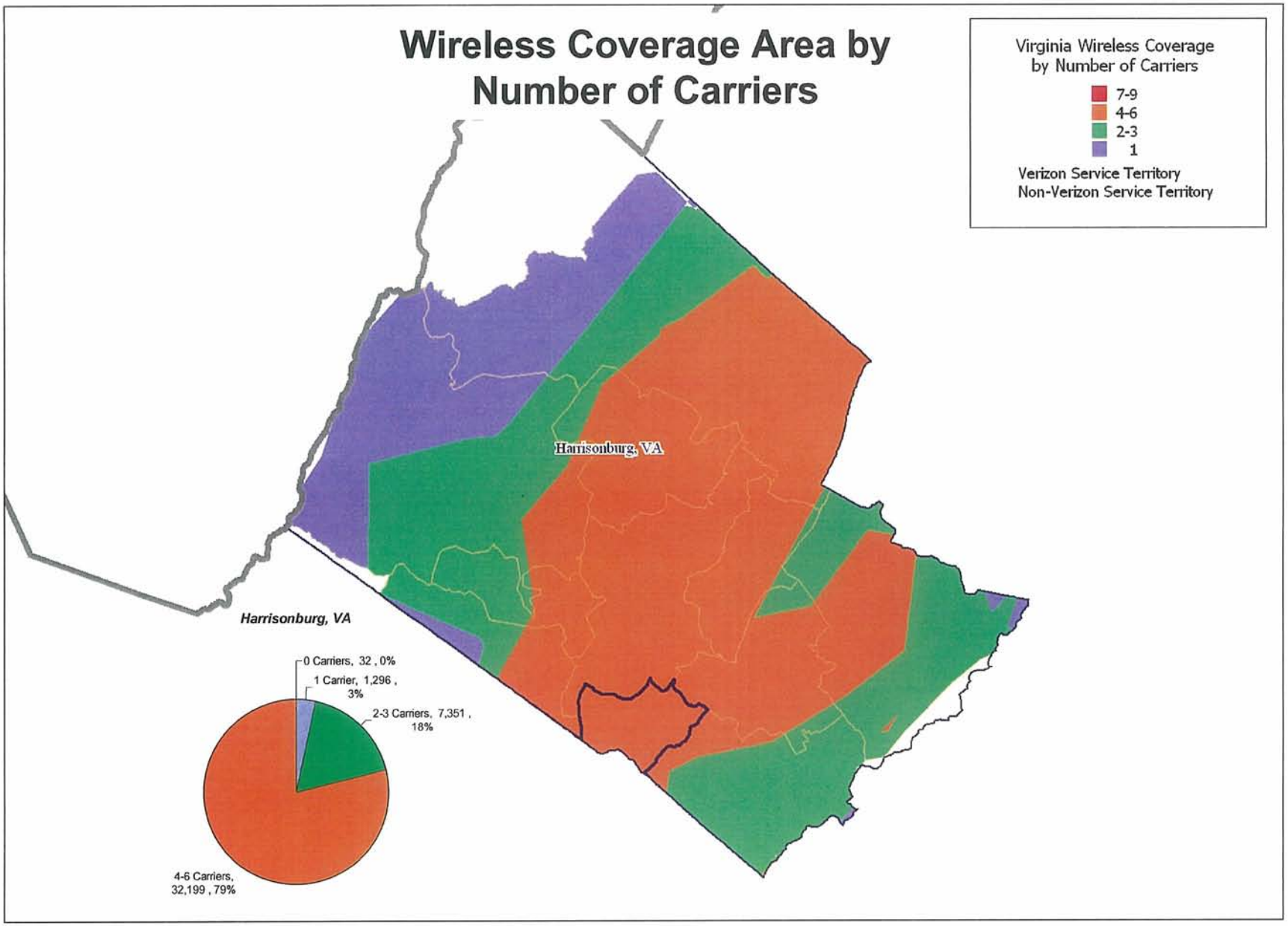
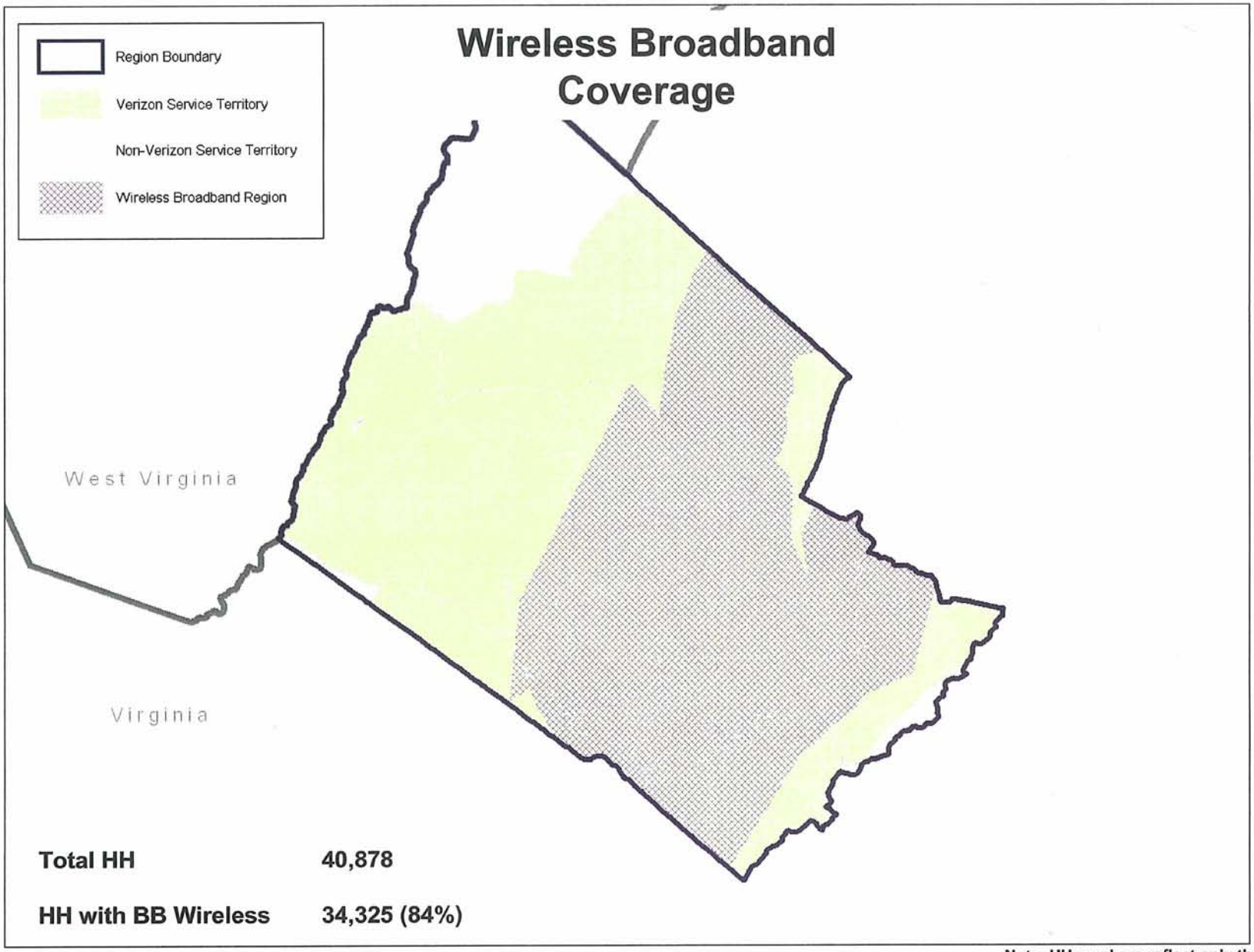


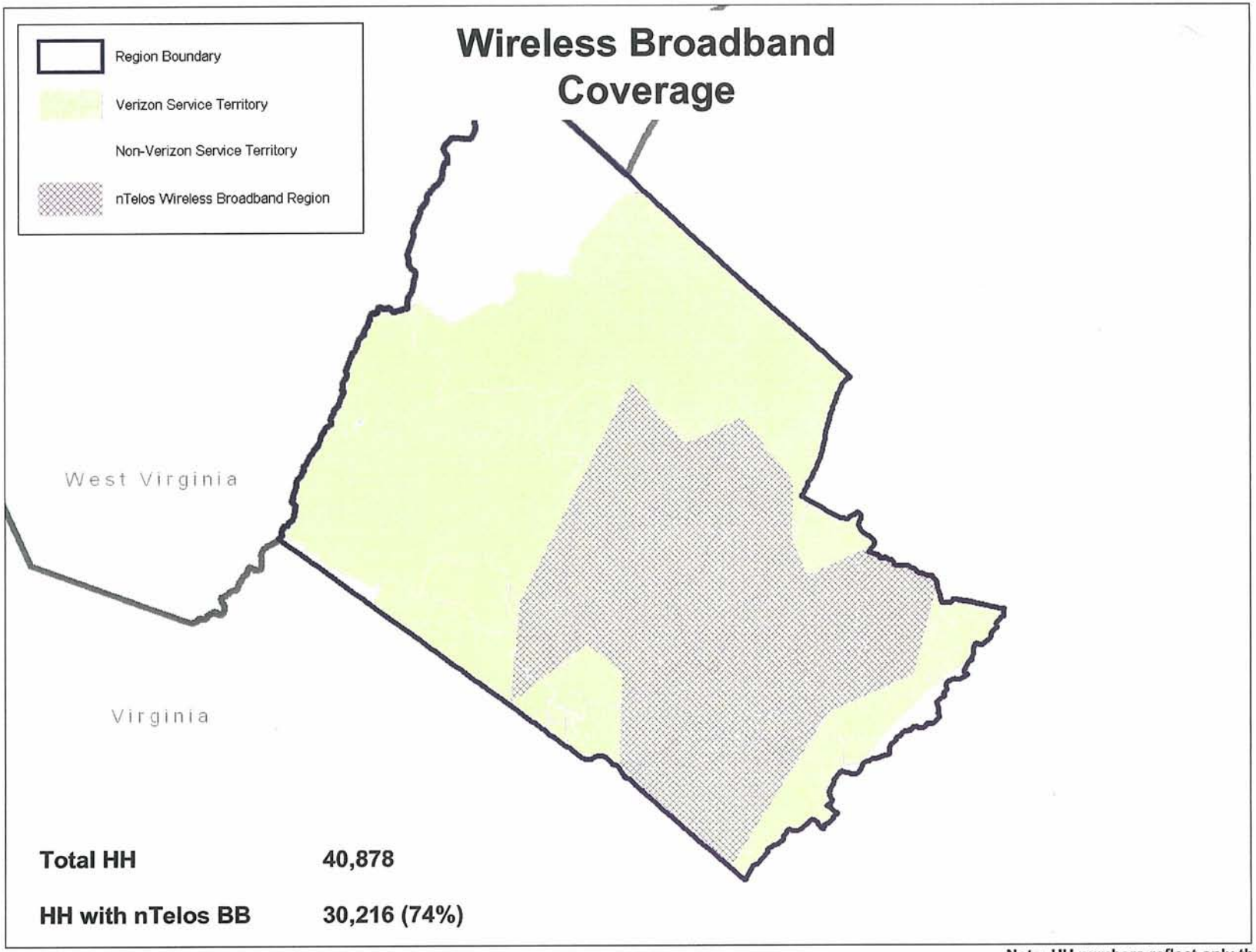
Exhibit HAR-12

Note: HH numbers reflect only those households in Verizon's Service Territory

HAR-13



Note: HH numbers reflect only those households in Verizon's Service Territory



Note: HH numbers reflect only those households in Verizon's Service Territory

Exhibit HAR-13, page 2 of 2

HAR-14

CONFIDENTIAL

Exhibit HAR-14

HAR-15

CONFIDENTIAL

Exhibit HAR-15

HAR-16

CONFIDENTIAL

Exhibit HAR-16

HAR-17

CONFIDENTIAL

Exhibit HAR-17

HAR-18

CONFIDENTIAL

Exhibit HAR-18

HAR-19

CONFIDENTIAL

Exhibit HAR-19